

Table I

Reaction Condition	Styrenic Copolymer (A)	Example				Comparative Example 1
		1 (A-1)	2 (A-2)	3 (A-3)	4 (A-4)	
Raw Material (Parts by Weight)	ST Monomer	68	68	58	100	68
	AN Monomer	32	32	22	0	32
	N-PMI Monomer	0	0	20	0	0
	BMI Monomer	0.02	0.01	0.01	0.02	0
	Initiator type	BPO	BPO	BPO/TX-29A	BPO	BPO
	Parts by Weight	0.02	0.02	0.015/0.005	0.02	0.02
	Chain Transfer type	TDM	TDM	TDM	TDM	TDM
	Agent	0.2	0.2	0.2	0.2	0.2
Reaction temperature (°C)	100/120	100/120	100/120	100/120	100/120	100/120
Reaction Pressure (kg/cm ²)	4.0/4.0	4.0/4.0	4.0/4.0	4.0/4.0	4.0/4.0	4.0/4.0
Residence Time in Reactors (hr)	2	2	2	2	7	2
Analysis Result	Resin Composition (Parts by Weight)	unit derived from ST	72	72	60	100
	unit derived from AN	28	28	20	0	72
	unit derived from N-PMI	0	0	20	0	28
	unit derived from BMI	0.02	0.01	0.01	0.02	0
	Residual BMI Monomer (ppm)	N.D.	N.D.	N.D.	N.D.	N.D.
	MZ (10 ³)	130.5	78.3	58	112	39.9
	MW (10 ³)	31.8	26.1	22.1	35	23.3
	MZ/MW	4.1	3	2.62	3.2	1.71
Physical Property	MI	0.61	0.75	0.73	0.68	0.98
	Maximum Extension Stress (Pa × 10 ⁶)	40	42	29	80	45
	Color	51	49	67	8.1	1.2
ST : Styrene					40	48

AN : Acrylonitrile
 N-PMI : N-phenyl maleimide
 BMI : N,N'-4,4'-diphenyl methane bismaleimide

BPO : Benzoyl peroxide
 TDM : dodecyl mercaptan

TX-29A : 1,1-bis((t-butyl peroxy)-3,3,5-trimethyl cyclohexane

Reaction Pressure: The data in table I means the pressure of first CSTR/second CSTR or first PFR/second PFR/third PFR, respectively

Table 2

		Comparative Example		
		Example 3	Example 4	
		(C-1)	(C-2)	(C-3)
Rubber Modified Thermoplastic Styrenic Resin Composition	Raw Material (Parts by Weight)			
ST Monomer	AN Monomer	74	74	74
BD Rubber	BD Rubber	26	26	26
BMI Monomer	BMI Monomer	12	12	12
PGDA Monomer	PGDA Monomer	0.02	0	0
Initiator	Type	BPO	BPO	BPO
	Parts by Weight	0.05	0.05	0.05
Chain Transfer Agent	Type	TDM	TDM	TDM
	Parts by Weight	0.3	0.3	0.3
Reaction temperature (°C)		95/100/110/120	95/100/110/120	95/100/110/120
Reaction Pressure (kg/cm ²)		4.5/4/4/4	4.5/4/4/4	4.5/4/4/4
Residence Time in Reactors (hr)		4	4	4
Analysis Result	Resin Composition (Parts by Weight)	unit derived from ST unit derived from AN unit derived from BMI Rubber Content (weight%)	75 25 0.02 16	75 25 0 16
	Residual BMI Monomer (ppm)	N.D.	N.D.	N.D.
Physical Property	M	32	35	26
	Heat Stability(ΔYI)	45	46	58
	Thickness Uniformity	○	×	×
	The gloss on the surface of injected products after painting	○	×	×

PGDA : Neopentyl glycol diacrylate

Reaction temperature: The data in table 2 means the temperature of first CSTR/second CSTR/third CSTR/fourth CSTR, respectively

Reaction Pressure: The data in table 2 means the pressure of first CSTR/second CSTR/third CSTR/fourth CSTR, respectively

Table 6

		Example 6 (C-4)	Example 7 (C-5)	Example 8 (C-6)	Example 9 (C-7)	Comparative Example 5 (C-8)	Comparative Example 6 (C-9)
Rubber Modified Thermoplastic Styrenic Resin Composition							
Composition (parts by weight)	Rubber Graft Copolymer (B'-1)	20	20	0	0	20	0
	Rubber Graft Copolymer (B'-2)	30	30	36	36	30	36
	Styrenic Copolymer (A-1)	50	0	64	0	0	0
	Styrenic Copolymer (A-3)	0	50	0	64	0	0
	Styrenic Copolymer (A-5)	0	0	0	0	50	0
	EBS	0.3	0.3	0.3	0.3	0.3	64
Analysis Result	Rubber Content (weight%)	17	17	18	18	17	18
	Residual BMI Monomer (ppm)	N.D	N.D	N.D	N.D	N.D	N.D
Extrusion Condition	Extrusion temperature(°C)	200-220	220-240	200-220	220-240	200-220	200-220
	Die temperature(°C)	220	240	220	240	220	220
Physical Property	MI	10.9	6	12.3	5.2	11.1	12.7
	Heat Stability(ΔYI)	47	44	45	42	42	48
	Number of Contaminations	1	3	2	3	2	0
	Thickness Uniformity	○	○	○	○	x	x
	The gloss on the surface of injected products after painting	○	○	○	○	x	x